

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system for providing a VPN (Virtual Private Network) service by connecting a VPN to a mobile communication network, comprising:

a home agent (HA) in which ~~is stored~~ location information of a mobile node (MN) and information about the VPN service for the MN are stored when the HA receives from the MN, a location registration request message for the VPN service;

a foreign agent (FA) for receiving location registration information from the MN, transmitting a location registration request message to the HA, and transmitting data to an ISP (Internet Service Provider) router of an FA network, when receiving a VPN service request;

an ISP server positioned between the ISP router of the FA network and an ISP router of the VPN, for managing information on the ISP routers and establishing IP tunneling between the ISP routers;

a router network for routing the FA network and the VPN, and receiving and forwarding the data using an IP tunnel to a correspondence node; and

a VPN server for providing the VPN service.

2. (Original) The system as claimed in claim 1, wherein the router network includes a server for searching an edge Internet Protocol (IP) router in the network using an address of the FA.

3. (Original) The system as claimed in claim 1, wherein the HA prevents the MN from accepting a call request received from a specific node in an IP network while the MN is performing the VPN service.

4. (Currently Amended) A system for providing a Virtual Private Network (VPN) service by connecting a VPN to a mobile communication network, comprising:

an home agent (HA) in which ~~is stored~~ location information of an mobile node(MN) and information about the VPN service for the MN are stored when the HA receives from the MN, a location registration request message for the VPN service;

an foreign agent (FA) for receiving location registration information from the MN, transmitting a location registration request message to the HA, transmitting data to an Internet Service Provider (ISP) router of an FA network, when receiving a VPN service request, and performing Internet Protocol (IP) communication with a specific subscriber;

the MN for performing the Internet Protocol(IP) communication with the FA, the MN being registerable in the VPN;

an ISP server positioned between the ISP router of the FA network and an ISP router of the VPN, for managing information on the ISP routers and establishing IP tunneling between the ISP routers;

a router network for routing the FA network and the VPN, and performing a data service with the MN through the IP communication with the FA; and

a VPN server for providing the VPN service.

5. (Original) The system as claimed in claim 4, wherein the router network includes a server for searching an edge IP router in the network using an address of the FA.

6. (Original) The system as claimed in claim 4, wherein the HA prevents the MN from accepting a call request received from a specific node in an IP network while the MN is performing the VPN service.

7. (Original) The system as claimed in claim 4, wherein the MN transmits an address of the HA and an address of the VPN server to the FA during VPN registration, and performs the VPN service by receiving a temporary ID for use of the VPN from the FA during the location registration.

8. (Original) The system as claimed in claim 7, wherein the MN stores an address of the VPN server and an address of a router in the network, received from the FA, and performs the VPN service using the received addresses.

9-18. (Cancelled)